



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Margaret E. Black  
Application No. : 09/173,463  
Filed : October 14, 1998  
For : THYMIDINE KINASE MUTANTS AND FUSION PROTEINS  
HAVING THYMIDINE KINASE AND GUANYLATE KINASE  
ACTIVITIES

Examiner : Christian L. Fronda  
Art Unit : 1652  
Docket No. : 60117-4  
Date : July 11, 2008

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

STATEMENTS UNDER 37 C.F.R. 1.821 and 1.825

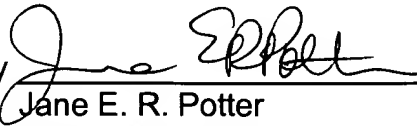
Commissioner for Patents:

I, Dr. Jane E.R. Potter, Esq., do hereby declare that the amendment to the sequence listing included in the replacement sheets and CRF comprising the amended sequence listing are supported by the application as filed. In addition, the replacement CRF copy and paper copies of the sequence listing are identical.

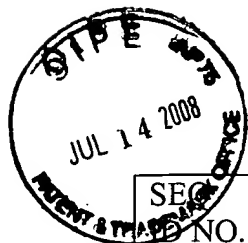
Several Thymidine Kinase mutants are described in the application as filed, but were never assigned sequence identifiers. New SEQ ID NOs. 122-172 are added by way of this amendment. As support for this amendment, the attached table identifies where all of the application's sequences are described, including the newly added sequences. In addition, a substitute Specification (clean and redline version) is filed

herewith, incorporating the newly added sequence identifiers. No new matter is contained in the replacement sheets and CRF comprising the amended Sequence Listing.

Respectfully submitted,  
Margaret Black  
DAVIS WRIGHT TREMAINE LLP

By   
Jane E. R. Potter  
Registration No. 33,332

1201 Third Avenue, Suite 2200  
Seattle, WA 98101-3045  
Phone: (206) 622-3150  
Facsimile: (206) 757-7700



## Support in Specification and Figures for Sequences

SEQ. NO.	Brief Description	Where described in Specification as filed
1	Nucleotides in the open reading frame of HSVTK-1	Figure 23
2	primer	Page 40
3	Primer	Page 40
4	Primer	Page 41
5	Primer	Page 41
6	Primer	Page 43, 52
7	Primer	Page 43, 52
8	Primer	Page 44
9	Primer	Page 51
10	Primer	Page 51
11	Primer	Page 54
12	wild type nucleic acid sequence (fragment)	Figure 3, page 63 (Table II)
13	wild type amino acid sequence (fragment)	Figure 3, page 63 (Table II)
14	TKF 36 (HSVTK Mutant) nucleic acid sequence (fragment) (A168S)	page 63 (Table II), pages 62-67
15	TKF 36 (HSVTK Mutant) amino acid sequence (fragment) (A168S)	page 63 (Table II), pages 62-67
16	TKF 41 (HSVTK Mutant) nucleic acid sequence (fragment)	page 63 (Table II), pages 62, and 67-68
17	TKF 41 (HSVTK Mutant) amino acid sequence (fragment) (P165S/A167G/L170Q/A174V)	page 63 (Table II), pages 62, and 67-68
18	TKF 52 (HSVTK Mutant) nucleic acid sequence (fragment)	page 63 (Table II), pages 62, and 64
19	TKF 52 (HSVTK Mutant) amino acid sequence (fragment) (A168T)	page 63 (Table II), pages 62, and 64
20	TKF 99 (HSVTK Mutant) nucleic acid sequence (fragment)	page 63 (Table II), pages 62, and 67-68
21	TKF 99 (HSVTK Mutant) amino acid sequence (fragment) (C171L/A174T)	page 63 (Table II), pages 62, and 67-68
22	TKI 208 (HSVTK Mutant) nucleic acid sequence (fragment)	Figure 3, Page 46, page 63 (Table II), pages, 62, and 67-68
23	TKI 208 (HSVTK Mutant) amino acid sequence (fragment) (L170V)	Figure 3, Page 46, page 63 (Table II), pages, 62, and 67-68
24	MB126 – Primer	Page 75
25	MB127 – Primer	Page 75
26	Primer	Page 89
27	Primer	Page 89
28	Primer – DMO 512	Page 89
29	Primer – DMO 513	Page 89
30	Primer – DMO 514	Page 89
31	Primer – DMO 515	Page 89
32	Primer	Page 89
33	Primer	Page 90

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35	Primer – DMO 594	Page 91
36	Primer – DMO 595	Page 91
37	Primer – DMO 674	Page 91
38	Primer – DMO 675	Page 91
39	Primer – DMO 731	Page 91
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41	Primer – DMO 676	Page 91
42	Primer – DMO 604	Page 92
43	Primer – DMO 605	Page 92
44	Primer – DMO 606	Page 92
45	Primer – DMO 607	Page 92
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48	Nucleotide sequence representative of a human guanylate kinase	Figure 24
49	Deduced Amino Acid sequence representative of a human guanylate kinase	Figure 24
50	Nucleotide sequence representative of a murine guanylate kinase	Figure 25
51	Deduced Amino Acid sequence representative of a murine guanylate kinase	Figure 25
52	Primer – DMO 748	Page 91
53	Primer – DMO 749	Page 91
54	Primer – DMO 750	Page 91
55	TKF 105 – HSVTK Mutant – nucleic acid	Figure 3, Page 46
56	TKF 105 – HSVTK Mutant - amino acid (L170I)	Figure 3, Page 46
57	TKF 2 - HSVTK Mutant – nucleic acid	Figures 3-4, pages 49-50
58	TKF 2 - HSVTK Mutant – amino acid (P165H/A167S/A174V)	Figures 3-4, pages 49-50
59	Wild Type nucleic acid fragment	Figure 17
60	Wild type amino acid fragment	Figure 17
61	Nucleotide changes shown in fragment of in mutant 30	Figure 17, page 77
62	Nucleotide changes shown in fragment of in mutant 51	Figure 17
63	Nucleotide changes shown in fragment of in mutant 75	Figure 17
64	Nucleotide changes shown in fragment of in mutant 84	Figure 17, page 77
65	Nucleotide changes shown in fragment of in mutant 132	Figure 17
66	Nucleotide changes shown in fragment of in mutant 197	Figure 17, pages 77-78
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\*new sequence